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HOW TO DETERMINE THE SIZE OF TAP AND METER

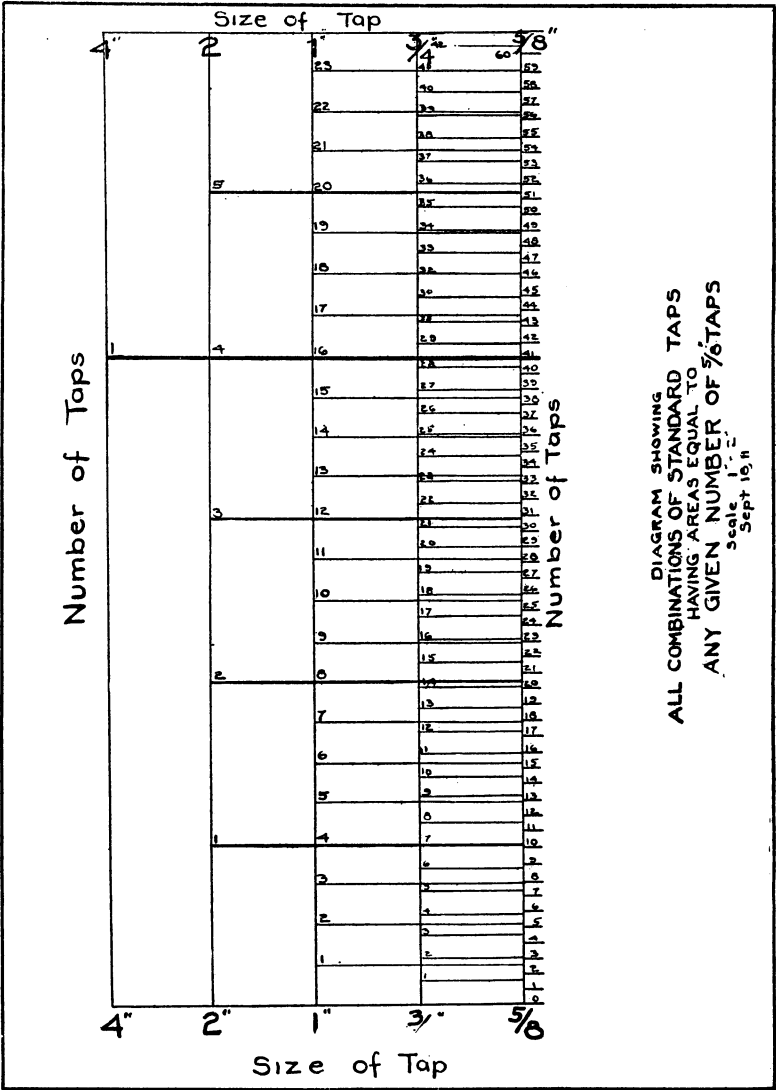
BY JACOB KLEIN

Up to recently a rule was in force permitting only one $\frac{5}{8}$ -inch tap for each 25 foot frontage, no matter whether the building was two stories or twelve stories high. There was no way out of it for the consumer except to agree to install meters for the entire supply, when an additional tap or a larger tap in the place of the one in use would be granted.

Careful studies have been made to arrive at a fair basis of determining the size of tap for all classes of buildings, and it was found that the only fair and equitable basis was the "floor area basis," and early last year a rule was adopted by the water department which permits the use of a $\frac{5}{8}$ -inch tap for the first 7500 square feet of floor area, a $\frac{3}{4}$ -inch tap for the first 15,000 square feet and above 15,000 square feet one $\frac{5}{8}$ -inch tap for every 10,000 square feet of floor space, computed as follows:

Up to 7,500 square feet.....	One $\frac{3}{8}$ -inch tap
7,500 to 15,000 square feet.....	One $\frac{3}{4}$ -inch tap
15,000 to 20,000 square feet.....	Two $\frac{5}{8}$ -inch taps
20,000 to 30,000 square feet.....	Three $\frac{5}{8}$ -inch taps or equivalent
30,000 to 40,000 square feet.....	Four $\frac{5}{8}$ -inch taps or equivalent
40,000 to 50,000 square feet.....	Equivalent of five $\frac{5}{8}$ -inch taps.

The floor space is computed by multiplying the area which the building occupies by the number of floors, exclusive of the cellar. The area of the building is computed from the general overall dimensions exclusive of small projections, such as bay windows, porches, etc. An extension to be included in the floor space must be at least 150 square feet per floor. The resulting figures are called the next higher even thousand; viz., 217,500 is considered as 218,000 square feet. No building is granted more than four taps, except upon written application accompanied by plans and specifications upon which is shown and described specifically the nature or class of business to be conducted and the purpose for which the water is required. The total number computed is reduced to equivalents. Buildings hav-



ing floor space of less than 7500 square feet are granted an additional $\frac{5}{8}$ -inch tap, provided it is found that the pressure under which the water is delivered through the main which supplies the building is not sufficient to raise water throughout the building without the aid of a pump.

It is sometimes found necessary to give applications for taps to supply breweries, ice houses, laundries, power plants, etc., special consideration as the floor area rule cannot always be applied to them. The contractor or plumber is required to file plans and specifications, showing the nature of business to be conducted and the purpose for which the water is required; also the quantity of water required per hour. These are investigated and a report stating the reasons for granting a larger size tap is filed simultaneously with the issuance of the permit.

The size of tap for fire purposes is determined by the capacity of the fire pump, or by the number of sprinkler outlets.

The standard sizes of taps in use are $\frac{5}{8}$, $\frac{3}{4}$, 1 and 2-inch. In Brooklyn $1\frac{1}{2}$ -inch taps are also used. The standard sizes for connections or "wet connections" are 2, 4, 6 and 8-inch. The sizes of meters are $\frac{5}{8}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$, 2, 3, 4, 6-inch, etc.

A 1-inch is the largest screw tap allowed on mains 8 inches in diameter or less. A 2-inch screw tap is made on mains 10 inches in diameter or over. Taps larger than 2 inches are wet connections.

Although there is no rule which makes it compulsory for owners of premises which face two streets to have a supply from each street the consumers are advised to do this, so that the least amount of inconvenience is experienced when it becomes necessary to shut down a main in one street. It is required, however, that in such cases a check valve be placed on each service pipe to prevent back pressure.

The size of the meter is determined by the size of the tap. A meter of the same dimensions as the tap, or *one* size larger only is permitted, but in no case may the meter be of smaller size than the tap. The rule limiting the meter to *one* size larger than the tap or connection is on account of the fact that a large meter when supplied through a small tap will not register correctly. Consumers in nearly all cases avail themselves of the privilege of using a meter one size larger than the tap.

DISCUSSION

MR. WILLIAM LUSCOMBE: It would seem that, while that might be a good way of determining the size of the taps, yet there is another very important factor that should be considered, namely, the number of fixtures, the kind of fixtures and for what purpose the water is to be used. We all know of buildings that have large floor space where little or no water is used; and on the other hand, buildings of very limited floor area where the registration of meters applied to the service is comparatively great. The fixtures, faucets, valves, etc., and the purpose or purposes for which the water is to be used should also be considered as governing factors, as well as the floor space.